

Factors that Influence Change in Hispanic Identification: Evidence from Linked Decennial Census and American Community Survey Data

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Abstract

This study explores patterns of ethnic boundary crossing as evidenced by changes in Hispanic origin responses across decennial census and survey data. We identify socioeconomic, cultural, and demographic factors associated with Hispanic response change. In addition, we assess whether changes in the Hispanic origin question between the 2000 and 2010 censuses influenced changes in Hispanic reporting. We use a unique large dataset that links a person's unedited responses to the Hispanic origin question across Census 2000, the 2010 Census and the 2006-2010 American Community Survey five-year file. We find that most of the individuals in the sample identified consistently as Hispanic regardless of changes in the wording of the Hispanic origin question. Individuals who changed in or out of a Hispanic identification, as well as those who consistently identified as non-Hispanic (of Hispanic ancestry), differed in socioeconomic and cultural characteristics from individuals who consistently reported as Hispanic. The likelihood of changing their Hispanic origin response is higher among U.S.-born individuals, those reporting mixed Hispanic and non-Hispanic ancestries, those who speak only English at home, and those who live in tracts that are predominantly non-Hispanic. Racial identification and detailed Hispanic background also influence changes in Hispanic origin responses. Finally, changes in mode and relationship to the reference person in the household are associated with changes in Hispanic origin responses, suggesting that data collection elements also can influence Hispanic origin response change.

Keyword: Hispanic response change; ethnic identification; linked decennial census records; American Community Survey

JEL Classification:

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Introduction

Although race and ethnicity are distinct social concepts, they sometimes overlap and may influence each other (Choi et al. 2008; Kibria 2000; Perez 2008). While racial identity is said to reflect a person's conscious membership in a group based on ancestry and color (Fredrickson 1988), ethnic identity refers to an individual's assertion of group membership based on perceived shared culture, history, religion and/or national affiliation (Desmond and Emirbayer 2009; Fredrickson 1988).

Social psychological theories contend that an individual's identity is endlessly shaped by interactions with others (Cooley [1902] 1983; Giddens 1991). In the course of developing a self-identity, individuals are influenced by the identities that others assign to them, and simultaneously they try to influence the views that others have about them by strategically revealing certain aspects while withholding others (Goffman 1959). The interplay of these processes, which involve not only physical traits, but also socioeconomic status and cultural milieu, continuously shape characteristics that once were considered immutable and outside a person's control, such as a person's perception of her own ethnic and racial identity (Cornell and Hartmann 2007).

A growing number of studies confirm that some individuals change their racial or ethnic identity, or at least how they identify to others, not only over time, but sometimes depending on audience or social context (Brown et al. 2006; Eschbach and Gómez 1998; Harris and Sim 2002; Liebler et al. 2017; Perez 2008; Waters 1990). In this respect, Desmond and Emirbayer (2009) argue that an individual's change in racial or ethnic identification often has little impact on how others view or label them, and that convincingly changing ethnic or racial identities seems to depend on the degree to which

those identities are not stigmatized. That is, White Americans may choose to report different European ancestries or ethnicities at different times because these are “symbolic” in the sense that such reporting is voluntary and optional, and changing a reported ethnicity is not likely to influence the person’s life chances or lifestyle (Alba 1990; Gans 1979; Waters 1990). In contrast, darker skin individuals are likely to have fewer ethnic choices and these may influence their life chances (Arce et al. 1987; Denton and Massey 1989; Desmond and Emirbayer, 2009; Haller et al. 2011; Murguía and Telles 1996; Telles and Murguía 1990; Waters 1990, 1996).

This is particularly relevant among Hispanics because, like other ethnic groups that originate from racially diverse countries, they are a heterogeneous population in terms of their physical appearance, socioeconomic status, national history, and immigration trajectories (Ennis et al. 2011; Montalvo and Codina 2001).¹ Outside of their ethnic community, for example, Hispanics who identify racially as Black or Asian may feel that their ethnicity is overshadowed by the racialized stereotypes that sustain the system of stratification in the U.S. (Arce et al. 1987; Choi et al. 2008; Denton and Massey 1989; Kibria 2000; Waters 1990, 1996). In particular, the persistence of the “one-drop” rule that prompts all Blacks to identify as such may mean that dark-skinned Hispanics are less likely to self-report as Hispanic and more likely to be perceived and treated as non-Hispanic Black (Choi et al. 2008; Perez 2008). Similarly, through interethnic ancestry (e.g., having a Hispanic and a non-Hispanic parent) and upward

¹ Hispanic or Latino origin refers to heritage, nationality, lineage, or country of birth of a person or a person’s ancestors before immigrating to the United States from any of the following countries or regions: Cuba, Mexico, Puerto Rico, South or Central America, or other Spanish culture or origin, regardless of race (Humes et al. 2011).

socioeconomic mobility, the salience of a Hispanic ancestry may fade as children assimilate into a non-Hispanic White identity (Alba and Islam 2009; Duncan and Trejo 2011, 2016; Emeka and Vallejo 2011).

Much of the research on changes in racial and ethnic identification has focused on racial fluidity (Harris and Sim 2002; Liebler et al. 2017; Saperstein and Penner 2012). Research that has evaluated characteristics associated with changes in Hispanic origin identification has primarily been conducted on adolescents using cohort studies (Brown et al. 2006; Eschbach and Gómez 1998; Perez 2008) or cross-sectional data (Alba and Islam 2009; Emeka and Vallejo 2011).

We contribute to the literature on changes in Hispanic origin identification² by leveraging a unique large dataset with individual-level linked responses to two different wordings of the Hispanic origin question asked to adults in three different years. Specifically, we focus on patterns of unedited responses to the Hispanic origin question across Census 2000, the 2010 Census, and the 2006-2010 five-year American Community Survey (ACS) file to explore the role that selected demographic, incorporation, and contextual factors play on whether a person identifies consistently as Hispanic. In addition, we incorporate in our analysis information about changes in question wording, relationship to the household reference person, and mode of data collection to ascertain their influence on a person's Hispanic origin response change over

² We are cognizant that a Hispanic “identity” is not necessarily the same as a Hispanic “identification” or self-report; therefore, our analysis is limited to whether an individual's Hispanic identification or self-report changes over time in ways that can be associated with sociological factors. In addition, as with other household surveys, it is not known whether someone else in the household provided the responses for any of the individuals in the sample.

time. Further, we study which factors in our analysis contribute the most to Hispanic response change.

Studying Hispanic origin response change is important for several reasons. First, Hispanics comprise the largest minority group in the United States, reaching 55.4 million in 2014. Hispanics are among the fastest growing groups and are projected to reach 119 million in 2060, representing 28.6 percent of the population (Colby and Ortman 2015). Second, because the Hispanic population is heterogeneous in their socioeconomic and phenotypical characteristics, its incorporation to American society is likely to be equally diverse. While some paths to their incorporation will involve interethnic marriage and, perhaps, fading Hispanic identification among their children, other paths may result in stronger ethnic attachment, or in the permanent adoption of a fluid Hispanic origin identification to negotiate both Hispanic and non-Hispanic social contexts. Understanding the influence that contextual, socioeconomic and demographic factors may have on whether individuals retain a Hispanic origin identification over time can provide a preview of the future of social stratification in the U.S., as the dynamic incorporation of Hispanics continues to challenge the Black and White racial divide of the past.

Consistent with previous research, we find three patterns of response to the Hispanic origin question. Some individuals of Hispanic ancestry consistently identify as non-Hispanic, others change in and out of a Hispanic identification, but most identify consistently as Hispanic. There are differences among these three groups not only by socioeconomic status, but also by country of origin or background and their cultural milieu. We also find that individuals who change their identification from non-Hispanic to Hispanic when answering to the same question wording have very similar

characteristics as those who change their identification in the opposite direction, suggesting that their Hispanic identification may be fluid but not necessarily fading.

Previous Literature

Demographic

The Hispanic population includes individuals from a broad spectrum of skin color and other phenotypical traits (Montalvo and Codina 2001). Racial reporting by Hispanics tends to be influenced by their skin color, surname and socioeconomic status (Itzigsohn et al. 2006; Jiménez 2004, 2008; López 2003). Hispanics who report as White tend to have higher socioeconomic status and are more likely to live in neighborhoods with non-Hispanic Whites. In contrast, darker-skin Hispanics and those with Amerindian phenotypes are more likely than lighter-skin Hispanics to identify as Black or as Some Other race, to live in close proximity to non-Hispanic Blacks, and to report experiencing discrimination (Golash-Boza and Darity 2008; Itzigsohn et al. 2006; Logan 2003; Perez 2008).

There seems to be an interaction between racial and Hispanic origin identification. Hispanics who report as Black or as Asian are less likely to identify consistently as Hispanic than those who report as White, American Indian, Some Other Race or report no race (Choi et al. 2008; Duncan and Trejo 2011, 2016; Perez 2008; Waters 1996). It has been suggested that the salience of Black and Asian racialized identities in the U.S. stratification system discourages the formation of a Hispanic identity (Choi et al. 2008; Kibria 2000; Lopez 2003; Perez 2008). In contrast, identification as Hispanic may be

imposed on Latinos whose Amerindian phenotypes mark them as “outsiders” (Padilla 2006).

Previous studies report that consistency of Hispanic identification differs by generational status and country of origin. Duncan and Trejo (2016) find that Mexicans are more likely than other Hispanic groups to report their interethnic children as Hispanic; in contrast, later-generation individuals of Hispanic ancestry who identify with a pan-ethnic label rather than with a specific country of origin are least likely to identify consistently as Hispanic (Perez 2008).

Incorporation

While immigrants tend to emphasize their country of origin as an identifier, this becomes increasingly difficult for subsequent U.S.-born generations whose connection to their ancestors’ country of origin may not be as strong compared to their connection to their schoolmates and peers (Ogbu 1990; Waters 1996).

According to the assimilation perspective, over several generations the native-born children of immigrants experience a multidimensional process in which their characteristics converge with those of U.S. mainstream society (Alba and Nee 1997; Glazer 1993; Gordon 1964). As part of this process, a person’s understanding of their own ethnicity transforms from central to their lifestyle to a rather symbolic and sometimes even fluid identifier (Gans 1979; Gordon 1964; Waters 1990). Ethnic residential desegregation and interethnic marriage are seen as the ultimate indicators of mainstream assimilation, as well as a contributor to the decline in the importance of ethnicity (Alba 1990; Gordon 1964; Lieberman and Waters 1988).

Reformulations of the assimilationist perspective point out that this may not be the path to incorporation for the more recent waves of non-European non-White immigrants and their children because of their socioeconomic diversity and broad range of phenotypes (Haller et al. 2011; Montalvo and Codina 2001). Those with light skin and European phenotypes, high levels of education or social capital may experience rapid socioeconomic mobility and social incorporation into the non-Hispanic White majority. Hispanics with Black or Amerindian phenotypes, especially if they arrive with limited labor market skills or encounter a hostile social context, may experience downward incorporation and their children may assimilate to racial minorities, with all the socioeconomic disadvantages that may come with this (Arce et al. 1987; Gómez 2000; Haller et al. 2011; Padilla 2006; Portes and Rumbaut 1996, 2001; Portes and Zhou 1993).

Several studies find that native-born individuals of Hispanic ancestry who speak only English at home, have college or higher levels of education, and live in areas that are predominantly non-Hispanic may no longer or not always identify as Hispanic (Alba and Islam 2009; Duncan and Trejo 2011, 2016; Emeka and Vallejo 2011). Moreover, interethnic marriage, signaling incorporation into American social and family life, is more common among third and higher generation Hispanics of higher socioeconomic status than among immigrants and less educated Hispanics (Alba and Nee 1997; Duncan and Trejo 2016; Hirschman 2001; Lee and Edmonston 2005, 2006). About one third of the children of interethnic couples are reported as non-Hispanic, and although this is more likely if Hispanic ancestry is reported only on one side of a parent's family, it varies by socioeconomic status, racial identification, and the extent to which parents and their

children are socialized to be part of the Hispanic culture (Duncan and Trejo 2016; Jimenez 2004; Lee and Edmonston 2005, 2006; Padilla 2006; Xie and Goyette 1997).

Context

Although the causality is not clear, there is a relationship between the ethnic composition in school and neighborhood, and whether U.S.-born children of Hispanic immigrants retain their ethnicity as a meaningful identifier (Eschbach and Gómez 1998; Xie and Goyette 1997). Not surprisingly, individuals in Hispanic communities where they come into contact with ethnic food, holiday celebrations, and Spanish language are more likely to identify as Hispanic than those living in non-Hispanic neighborhoods (Jimenez 2004; Perez 2008; Xie and Goyette 1997). Among youth of Hispanic ancestry, the proportion of Hispanic schoolmates is positively associated with consistently reporting themselves as Hispanic (Eschbach and Gómez 1998); similarly, Black individuals of Hispanic ancestry are more likely to identify as Hispanic in areas with a large presence of Black immigrants from Cuba, Puerto Rico or Dominican Republic (Choi et al. 2008; Logan 2003; Padilla 2006).

In addition, the ethnic identification of native individuals of Hispanic ancestry is influenced by a constant flow of immigrants arriving from Latin America (Jimenez 2004, 2008). Recently arrived immigrants bring out cultural differences that may set them apart from later-generation Hispanics. Those who are born in the U.S. and do not speak Spanish, for example, may feel less “authentic” if their Hispanic membership is questioned by recent immigrants playing the role of gatekeepers. This is in contrast to the experience of descendants of European immigrants who generally are able to claim an

ethnic option without being challenged about how well they know their ancestors' culture or speak their language (Gans 1979; Jimenez 2004; Waters 1990).

Question Wording and Data Collection Practices

Previous studies by Census Bureau researchers have documented that changes in question wording and format can influence the response to the Hispanic origin question (ACS Research Note 2009; Cresce et al. 2003; Martin 2002). There were four major changes, in addition to changes in questionnaire layout, to the Hispanic origin question between Census 2000 and the 2010 Census (the Census 2000 wording and format was used in ACS up to and including the survey in 2007, and changes were made to ACS in 2008 to be consistent with the 2010 Census). First, the wording of the question changed from, "Is this person Spanish/Hispanic/Latino?" in Census 2000 to "Is this person of Hispanic, Latino, or Spanish origin?" in the 2010 Census. Second, in Census 2000 no Hispanic origin examples were listed under the "Yes, other Spanish/Hispanic/Latino" response category, while in the 2010 Census examples of six Hispanic origin groups were listed ("...for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on"). Third, the question in Census 2000 had the instruction, "Mark (X) the **No** box if **not** Spanish/Hispanic/Latino," which was removed in the 2010 Census. Fourth, the instruction at the top of the Hispanic origin question was modified from "Please answer BOTH Questions 7 and 8" in Census 2000 to "NOTE: Please answer BOTH question 8 about Hispanic origin and Question 9 about race. For this census, Hispanic origins are not races" in the 2010 Census.

Past evaluations of question changes have reported that both using the term ‘origin’ in the Hispanic origin question and adding examples of specific Hispanic origins for the ‘Other Spanish/Hispanic’ response category tend to elicit a higher percent of specific Hispanic origin responses (e.g., Mexican, Puerto Rican origin, and Cuban) rather than general responses, such as Hispanic or Latino (ACS Research Note 2009; Cresce et al. 2003; Martin 2002).

In addition, Lavrakas et al. (2005) examined three empirical studies that used both versions of the Hispanic origin question. They suggested that adding the term ‘origin’ to the Hispanic origin question may have changed its interpretation from asking about ethnic membership to asking about a person’s ethnic ancestry, and this resulted in significant increases in the number of individuals in these studies who, although of Hispanic descent, may not (always) self-report as Hispanic.

Some data collection practices, such as collecting information using different modes or from a different household member, could also result in inconsistent Hispanic origin responses between two years. In particular, adding an interviewer who mediates between respondents and the census or survey instrument, may elicit different responses. Similarly, previous studies have found that in most cases the household reference person or his/her spouse provides the information for all household members (DeMaio and Bates 1990; Sweet 1990a and 1990b). This suggests that the likelihood of discrepancies may be higher in complex households for individuals who are distant relatives or non-relatives of the household reference person (Grieco and Armstrong, 2014).

Data and Methods

The sample we use in this study includes individuals ages 25 and older who provided responses about their Hispanic origin three times: in the Census 2000, the 2010 Census and one of the ACS between 2006 and 2010. In addition, we only include individuals living in residential units (no group quarters). Race, Hispanic origin, sex and age were not edited, imputed or provided by a person not living in the household (no ‘proxy’ responses). Because of processing errors in the Census 2000, we excluded records of individuals who reported multiple races that included Some Other Race as one of them (Humes et al. 2011).

By linking these data sources, we are able to explore responses to the Hispanic origin question when individuals answered to the same Hispanic origin question wording in different years and when they answered to a different question wording, as was the case between Census 2000 and 2010 Census. Individuals were linked across the census and survey files using a unique, protected identifier assigned using probability record linkage techniques (see Wagner and Layne 2014 for details). After these identifiers were assigned, personally identifiable information was removed from the files to anonymize the data and preserve confidentiality.³

In some cases a unique identifier could not be assigned because there was not enough information about a person, the person was not in the census reference files or information between two records for the same person did not match. The ACS five-year

³ Record linkage is subject to a small percent of false matches, which has been estimated to be less than one percent for the type of search module (GeoSearch) reported most frequently in this particular dataset (Layne et al. 2014). However, to further reduce false matches, we restricted the sample to individuals whose unedited age differed by a feasible number of years (within two years of what would be expected using Census 2000 age as reference) and for whom unedited gender matched in all the linked files.

file in this analysis contains identifiers for 92.1 percent of the records. The weights were re-adjusted to compensate for the 7.9 percent of records that do not have identifiers using the inverse of the estimated coefficients of a logistic regression in which the dependent variable was either 0 (record has a unique identifier) or 1 (record does not have a unique identifier).⁴ Therefore, our results are reported using adjusted ACS replicate weights. The analysis was carried out with and without using ACS weights and the findings were similar in general.

After all restrictions, the linked unweighted sample consists of about 628,800 individuals ages 25 and older who reported as Hispanic or of Hispanic ancestry in at least one of the three separate times they answered questions about Hispanic origin. This means that we include in the analysis individuals who (a) self-reported or were reported by the household respondent as Hispanic, or (b) reported Hispanic ancestry in the ACS, even if they did not report as Hispanic in any of the censuses or in the ACS.

Specifically, the ACS asks, “What is this person’s ancestry or ethnic origin?” and defines ancestry as “a person’s ethnic origin or descent, ‘roots,’ or heritage, or the place of birth of the person or the person’s parents or ancestors before their arrival in the United States.” The ancestry question is separate from the Hispanic origin question and provides space for up to two write-in answers. We coded responses into five categories: Hispanic only ancestries; mixed Hispanic and non-Hispanic, reported Hispanic first; mixed Hispanic and non-Hispanic, reported Hispanic last; only non-Hispanic ancestries

⁴ The explanatory variables in the regression to generate weights to compensate for individuals with no identifier were sex, age, age squared, marital status, time in the U.S. (if not native), English proficiency, Hispanic origin, race, education, urban/rural, group quarter, region, mode of data collection, and year of survey response (2006 – 2010).

reported; and, no ancestry specified. The last two categories were included only for individuals who identified as Hispanic in any of the censuses or surveys.

In the first part of the analysis we discuss the extent of response change to the Hispanic origin question and compare descriptive characteristics of individuals who consistently identify as Hispanic to those of individuals who changed their Hispanic response or consistently reported as non-Hispanic of Hispanic ancestry.

In the second part of the analysis, we use logistic regressions to model the association of individual and contextual factors with changes in Hispanic origin responses when answering to the same question wording in two different years. The dependent variables in the logistic regressions have three categories: identified consistently as Hispanic, changed from Hispanic to non-Hispanic or changed from non-Hispanic to Hispanic. These regressions exclude individuals who identified consistently as non-Hispanic to focus on inconsistent responses to the same Hispanic origin question.

The independent or explanatory variables in our regressions come from the ACS unless otherwise noted, and include:

Demographic – Detailed Hispanic origin/background⁵ (i.e., Mexican, Cuban, etc.), ancestry (i.e., Hispanic only, Mixed Hispanic and non-Hispanic, etc.), racial identification, whether there was a change in the race reported between the years compared, and place of birth and citizenship status combined (i.e, foreign born with 20 or more years in the U.S. and naturalized, etc.),

⁵ The country of origin or background comes from answers to the Hispanic origin question in census or ACS for individuals identifying as Hispanic. For individuals who reported Hispanic ancestry but consistently identified as non-Hispanic, this variable comes from their responses to the ancestry question in the ACS.

Socioeconomic and assimilation indicators – Educational attainment, adjusted personal income, and English proficiency if another language is spoken at home.

Contextual variables – Region of residence, change in region of residence between the years compared, percent Hispanic in the tract of residence, and changes in percent Hispanic in the tract of residence between the years compared.

Design and data collection variables – Whether the mode of data collection changed between responses (i.e., mail-out mail-back in both years compared to other modes or a combination of modes), and relationship to the household reference person (primary respondent) as reported in each of the sources. We emphasize that although the household roster provides information about each person's relationship to the household reference person, we do not know who specifically answered the ACS or census questions within the household, which could also contribute to discrepancies in Hispanic origin and race responses.

Age, gender, and marital status are controls in our analysis. A limitation in this study is that only individuals who identified as Hispanic or reported a Hispanic ancestry are included in the analysis. Individuals of Hispanic ancestry who do not report it are not in the study.

The sample used in this study is not nationally representative of the Hispanic population in the U.S. and it should not be interpreted as such. Only individuals 25 and older who received a unique identifier in all three data files were included in the analysis. Therefore, it excludes younger individuals and those who did not receive a unique identifier across the three data sources or did not answer the questionnaires in all three years. Previous studies find that Hispanics, non-citizens, individuals with low levels of

education and income, those who report low English language proficiency, and those who identify as Some Other Race are less likely to be assigned a unique identifier in the ACS than their counterparts (Bond et al. 2014). Our findings are only suggestive of the factors that may be associated with inconsistency in Hispanic identification.

Results

What are the patterns associated with consistently reporting as Hispanic in the Sample?

We first show the range of patterns of Hispanic origin response consistency across the years in the study. Table 1 shows the weighted frequency of responses to the two wordings of the Hispanic origin question. Individuals in the sample answered a question about their Hispanic origin in three different years: in the Census 2000, in the ACS between 2006 and 2010, and in the 2010 Census. The first eight rows in Table 1 show responses of those who were asked in Census 2000 and in ACS 2006 or 2007, ‘Is this person Spanish/Hispanic/ Latino?’ These individuals also answered the 2010 Census with the different question wording that included the term ‘origin.’ The last eight rows in Table 1 show the patterns among those who answered the ACS in 2008, 2009 or 2010, and also answered the 2010 Census, in both they were asked ‘Is this person of Hispanic, Latino, or Spanish Origin?’ These individuals also answered the question about Hispanic origin with the wording used in Census 2000, which did not include the word ‘origin.’

The first take away from Table 1 is that 86.2 percent of the individuals in the weighted sample (33.8 percent in row 1 plus 52.4 percent in row 9) consistently identified as Hispanic regardless of question wording. The rest of the individuals in the sample

were distributed as follows: 2.6 percent identified consistently as non-Hispanic regardless of question wording (rows 8 and 16). These individuals are in the sample because they reported Hispanic ancestry in their ACS response; 4.2 percent identified consistently as either Hispanic or non-Hispanic when answering to the same question wording at different times, but changed their responses when the question wording was changed (rows 2, 7, 12 and 13); and 7.2 percent changed their Hispanic origin response when answering to the same question wording in different years (rows 3, 4, 5, 6, 10, 11, 14, and 15).

The second take away is that although our sample includes only three responses per person, there were individuals who oscillated between Hispanic and non-Hispanic and then back to their initial (Census 2000) response. See rows 3, 6, 11 and 14 in Table 1. The response patterns found in Table 1 suggest that further qualitative research would increase our understanding of the reasons people change Hispanic identification.

Table 2 shows the data organized by the wording in the Hispanic origin question. Panels I and II show two years in which the same question wording was used. Most individuals (87.5 percent and 89.0 percent, respectively) identified as Hispanic in both years, and a small percent answered consistently that they were non-Hispanic. Between three and four percent changed their responses in and out of the Hispanic category even though they were answering to the same question wording. In panels I and II, the percent who changed from Hispanic to non-Hispanic was not statistically significantly different from the percent who changed in the opposite direction, from non-Hispanic to Hispanic.

In contrast, in Panel III, which compares responses when individuals were asked different Hispanic origin question wordings, a small but statistically significant larger

percent changed responses from non-Hispanic in 2000 to Hispanic in 2010 than in the opposite direction (4.4 percent and 3.1 percent, respectively). This is consistent with other studies reporting that using the term ‘origin’ and adding examples to the Hispanic origin question increases reporting among individuals of Hispanic heritage who do not usually identify as Hispanic (Lavrakas et al. 2005).

In Table 3, columns 1 and 2 show differences in demographic and socioeconomic characteristics between individuals in the sample who always report as Hispanic and those who always report as non-Hispanic of Hispanic ancestry. Those who identify as non-Hispanic (column 2) are much more likely to be native born, speak only English at home, have higher levels of education and income, and live in neighborhoods with a lower representation of Hispanics than those who report consistently as Hispanic (column 1). There are also large differences in the Hispanic backgrounds reported by individuals in these two groups. Sixty-nine percent of the individuals who identified consistently as non-Hispanics of Hispanic ancestry (compared to 5.2 percent of those reporting consistently as Hispanic) primarily identified their ancestry as Spaniard or reported a non-specific pan-ethnic response, and about three out of four listed a non-Hispanic ancestry along with their Hispanic one (compared to 4.0 percent of those reporting consistently as Hispanic). Moreover, a large percent of individuals who consistently identified as non-Hispanic (46.7 percent) reported their Hispanic ancestry after their non-Hispanic one. This is consistent with findings from Emeka and Vallejo (2011) that individuals who report their Hispanic ancestry after their non-Hispanic one may view their Hispanic ties as little more than a symbolic ethnicity.

In terms of race, those who reported consistently as non-Hispanic identified primarily as White alone (87.5 percent), while those who identified consistently as Hispanic were distributed among White alone (46.3 percent), Some Other Race alone (36.2 percent), and missing race responses (14.8 percent).

Note that greater racial inconsistency was found among adults reporting consistently as Hispanic than among those who do not identify as Hispanic but report Hispanic ancestry. Only about half (48.3 percent) of the individuals who consistently identified as Hispanic gave the same race response between Census 2000 and the 2010 Census, while the majority of those reporting as non-Hispanic (96.3 percent) reported the same race in both censuses. This is consistent with some Hispanics viewing their race as Hispanic and not identifying with a race response that does not include a Hispanic category (Compton et al. 2012; Perez 2008). Further analysis of the consistency of racial responses among individuals of Hispanic origin will be the focus of future research. We only note for now that Hispanics who identified as racial minorities were less likely to report their race consistently than those who identified as White.

The rest of the columns in Table 3 show pairwise comparisons between individuals who changed in and out of a Hispanic identification when the wording of the Hispanic origin question changed (column 3 vs. column 4) and when the same wording was used (columns 5-8), respectively.

Note that those who changed their response from non-Hispanic in 2000 to Hispanic in 2010 (column 4) had higher educational attainment than those who changed in the opposite direction (column 3). Nineteen percent of the individuals in our sample who changed from non-Hispanic in 2000 to Hispanic in 2010 had a college degree and

9.5 percent had postgraduate degrees, compared to 14.8 percent and 7.5 percent, respectively, among those who changed from Hispanic to non-Hispanic. Again, this is consistent with the argument that adding the term ‘origin’ and listing examples of countries of origin in 2010 changed the responses of more educated individuals of Hispanic ancestry who do not usually report as Hispanic (Lavrakas et al. 2005). As a reference, when the wording is the same (see columns 5 vs. 6, and 7 vs. 8), individuals who shifted from Hispanic to non-Hispanic or vice versa had a similar educational profile. This does not mean that education does not play an important role in Hispanic identification since individuals who changed in and out of a Hispanic response were significantly more likely to have a college degree or higher education than those who consistently identified as Hispanic.

Columns 5 through 8 in Table 3 show that for the most part individuals who changed their identification from Hispanic to non-Hispanic when answering the same Hispanic origin question in two different years are similar in their characteristics compared to those changing identification in the opposite direction, from non-Hispanic to Hispanic. On average, their socioeconomic characteristics seem to fall between those who consistently reported as non-Hispanic and those who reported consistently as Hispanic. The large differences in Hispanic backgrounds and neighborhood (census tract) contexts between those who identified always as non-Hispanic and those who changed their Hispanic response suggest that factors other than incorporation influence whether individuals are consistent or not in their Hispanic identification. In particular, those who changed in or out of a Hispanic response when answering to the same question wording in two years were more likely to speak Spanish in their home, to report a Mexican or

Puerto Rican background, less likely to report mixed Hispanic and non-Hispanic ancestries, and more likely to live in neighborhoods with a high Hispanic representation than those who report consistently as non-Hispanic.

In Table 4 we show our findings from logistic regressions modeling the role of various factors on individuals changing their Hispanic response when answering to the same question wording in two different years. In the first regression we compare responses to the question ‘Is this person Spanish/Hispanic/Latino?’ asked in Census 2000 and in ACS 2006-2007. The second regression compares responses to the question, ‘Is this person of Hispanic, Latino, or Spanish origin?’ asked in ACS 2008-2010 and in the 2010 Census. The coefficients in both regressions show the odds ratios of changing identification from Hispanic to non-Hispanic or in the opposite direction. The reference category is reporting as Hispanic in both years.

Net of other factors, native Hispanics and those who are English monolingual are more likely to change their Hispanic response than the foreign born and those who speak another language at home, and this is regardless of time in the U.S., naturalization status or English proficiency. The one exception is that individuals who have been in the U.S. for fewer than 10 years are more likely to change identification to non-Hispanic in the 2010 Census after reporting as Hispanic in the ACS.

In general, and contrary to findings that associate Hispanic attrition to higher educational attainment, in this regression education beyond high school is associated with similar or slightly higher odds of reporting consistently as Hispanic, net of other factors. That is, individuals with a high school education (the reference category) are more likely

to shift in and out of a Hispanic response than those with higher education, particularly those with a graduate or professional degree.

We found substantial variation in the odds of changing Hispanic identification by Hispanic background. In at least one of the two regression models, Central Americans, South Americans, and Dominicans were more likely than Mexicans to have reported as non-Hispanic and then changed to Hispanic (but not in the other direction) than to report consistently as Hispanic. In contrast, Cubans and Other Hispanics⁶ were more likely than Mexicans to change in both directions, in and out of a Hispanic identification, rather than to report consistently as Hispanic. Puerto Rican were more likely than Mexicans to always report as Hispanic when answering the same question in two different years.

Consistent with findings reported by Emeka and Vallejo (2011), compared to individuals who report only Hispanic ancestries, reporting a mixed or a non-Hispanic ancestry or not providing an ancestry are all associated with higher odds of changing responses to the Hispanic origin question, rather than consistently reporting as Hispanic. Note that the order in which ancestries are reported is meaningful for respondents since those who list their Hispanic ancestry last are at least twice as likely to change their Hispanic identification as those reporting their Hispanic ancestry first.

Racial identification and whether it is consistently reported also had a significant influence on Hispanic identification in our sample. Individuals who identified as Black alone or Asian/Native Hawaiian or Other Pacific Islander alone were significantly more likely than those reporting as White alone to change in and out of a Hispanic response. In

⁶ Other Hispanic includes individuals reporting as Spanish Basque, Spanish, Spaniard, Andalusian, Asturian, Castilian, Catalan, Balearic Islander, Gallego, Valencian, Canary Islander, Latin American, Latin, Latino, Hispanic, Californio, Tejano, Nuevo Mexicano or Spanish American.

contrast, individuals reporting as SOR alone were more likely than those reporting as White alone to report always as Hispanic. Individuals reporting multiple races and those who did not answer the race question were as likely or more likely than those who reported as White alone to report as Hispanic and subsequently change to non-Hispanic, but less likely to change identification in the opposite direction (from non-Hispanic to Hispanic) than to report always as Hispanic. Individuals who identified as American Indian or Alaska Native alone were as likely as those who report as White to identify consistently as Hispanic.

For the most part, individuals who changed their race response or did not answer the race question were more likely to report consistently as Hispanic compared to individuals who gave the same race response in the two years compared. That is, consistency in racial identification seems to be inversely related to consistency in Hispanic origin identification net of other factors (Compton et al. 2012; Perez 2008).

Contextual factors also had a significant influence on the consistency of Hispanic origin response. Individuals residing in the West region were more likely to identify consistently as Hispanic compared to those in all other regions of the country, including the Southwest. And in general, those who moved to a different region between responses were more likely to change in or out of a Hispanic response than those who stayed in the same region. This is consistent with the argument that the demographic composition and associated cultural messages in a person's community influence whether individuals identify as Hispanic (Padilla 2006).

Not surprisingly, living in a tract with a high representation of Hispanics was associated with higher odds of reporting consistently as Hispanic. In addition, we

measured change in the percent Hispanic in the tract of residence between two years. Increases in the percent Hispanic were associated with lower odds of changing identification from a Hispanic to a non-Hispanic response and higher odds of changing identification from a non-Hispanic response to Hispanic response. Thus, we confirm that changes in region and cultural milieu, the social setting where people live and interact with others, seem to bring about a re-examination as to whether or not to identify as Hispanic among individuals of Hispanic background or ancestry.

Given the findings discussed above about how personal characteristics and social context influence Hispanic origin identification, survey elements are likely to make relatively small contributions toward explaining changes in Hispanic origin responses. However, we do find that using a combination of modes to collect data, and being reported as a non-relative or a distance relative to the household reference person, are both associated with a higher likelihood of inconsistent Hispanic origin responses. This suggests that certain elements of data collection may increase the volatility of responses and researchers would do well to be aware of this in their analysis.

What Factors Contribute Most to Changes in Hispanic Origin Identification?

To assess the relative statistical impact of each group of covariates on the consistency of Hispanic origin response, we ran the regression models removing selected variables one at a time to assess the loss in net explanatory power in terms of chi-square points. Table 5 shows the loss of fit from removing each group of covariates as a percent of the fully specified model chi-square. When the ancestry variable is removed from the models, the loss of fit is equivalent to 27.5 percent of the chi-square points in the fully

specified first model, and to 30.2 percent in the fully specified second model in Table 4. Ancestry, specifically reporting Hispanic only, mixed Hispanic and non-Hispanic ancestry, or other types of ancestries, contributed the most in explaining variations in Hispanic origin reporting in our models. After ancestry, more modest contributions to the fit of the models come from racial identification, consistency in racial reporting, detailed country of origin or background, language spoken at home, and percent Hispanic in the neighborhood. Again, these factors all reflect the immediate cultural milieu that individuals experience in their daily life. Note that net of other factors, race reported and racial consistency makes a stronger contribution in the first model (12.6 percent) than in the second model (3.7 percent). We suspect that this difference in the contributions that race makes between the models is partly due to the years that we are comparing. The second model compares responses in ACS for years 2008-2010 to those in 2010 Census, so the years compared are closer than in the first model comparing responses in Census 2000 to responses in ACS 2006-2007.

The contributions of other variables to the model, such as nativity/years in the U.S., mode of data collection, region of residence, and socioeconomic variables are quite modest once ancestry, race, detailed Hispanic background, language spoken at home and Hispanic representation in the neighborhood are taken into account.

Discussion and Conclusion

In this study we explored factors associated with consistent and inconsistent Hispanic origin responses using individual-level linked census and survey data. Most of the individuals in our sample, 86.2 percent, identified consistently as Hispanic regardless of

changes in the wording of the Hispanic origin question. Another 2.6 percent identified consistently as non-Hispanic regardless of question wording. Among the rest of individuals in the sample, 4.2 percent identified consistently as either Hispanic or non-Hispanic when answering to the same question wording at different times, but changed their responses when the question wording was changed; and 7.2 percent changed their Hispanic origin response when answering to the same question wording at different times.

Our findings confirm and expand on three patterns of Hispanic origin identification reported in earlier research (Alba and Islam 2009; Brown et al. 2006; Duncan and Trejo 2011, 2016; Emeka and Vallejo; Eschbach and Gómez 1998; Lavrakas et al. 2005; Perez 2008). First, some individuals of Hispanic ancestry reported consistently as non-Hispanic regardless of changes in question wording, and they were more likely to be native, English monolingual, report mixed Hispanic and non-Hispanic ancestry, live in non-Hispanic neighborhoods, and report their ethnic ancestry as Spaniard or to give a generic Hispanic ancestry response.

Second, there were individuals in the sample who changed their responses from non-Hispanic when the question did not include the term ‘origin’ or listed examples to Hispanic when the term and examples were added to the Hispanic origin question⁷. Third, some individuals changed between Hispanic and non-Hispanic responses when answering to the same question wording in different years. Similar to those who

⁷ We also ran a regression in which the wording of the question was included as a variable, and net of other factors the coefficients suggested that individuals who answered the question when the term ‘origin’ was included were more likely to identify consistently as Hispanic or change identification from non-Hispanic to Hispanic than to change identification in the other direction (from Hispanic to non-Hispanic)

identified consistently as non-Hispanic of Hispanic ancestry, those who changed their Hispanic identification were more likely to be native, English monolingual and have mixed Hispanic and non-Hispanic ancestry than those reporting exclusively as Hispanic. However, those who had a fluid Hispanic response had a very different sociocultural context than those who always reported as non-Hispanic of Hispanic ancestry. Of those who changed in or out of the Hispanic category, between forty and fifty percent identified as having Mexican background, another quarter reported other Latin American or Caribbean backgrounds, and a much smaller percent reported Other Hispanic backgrounds. Also, about one third were bilingual, and a similar percent lived in tracts with medium to strong Hispanic presence. These factors combined suggest that their fluid Hispanic origin responses may be associated with their greater interaction with the Hispanic culture than was the case for individuals reporting consistently as non-Hispanic.

Moreover, while each of these factors may have an independent influence on whether individuals have a fluid Hispanic origin response, they are likely correlated in ways that strengthen or at least foster a Hispanic identification. For example, moving into a tract with a higher Hispanic presence may mean at the least the desire (or parental desire) for greater exposure to the culture and language, and these interactions likely influence the ethnic composition of peers and reference groups, as well as the individual's self-perception of their racial and ethnic identities. Further research could help understand whether fluidity in Hispanic identification is a sign of fading ethnic attachment or the result of negotiating self-identity among bicultural or even multicultural individuals who straddle two worlds, one of which values adherence to cultural practices and rituals from their parents' or grandparents' country of origin, and

the others embedded in the American culture to which they have belonged for most or all of their lives. In our models, the variable that makes the largest contribution toward explaining variation in Hispanic response is the reported ancestries of respondents. This suggests that the identity of Hispanic bicultural or multicultural individuals is continuously influenced by their interactions with members of the various racial and ethnic groups to which they belong. Further evidence of the influence of peers and community on Hispanic identification is provided by the findings that both changing the region of residence and changing the percent Hispanic in the tract of residence between two years are associated with a higher likelihood of changing Hispanic origin response.

We also find that the individuals in the sample who report consistently as Hispanic are more likely to change their race responses between two years than those who switch in or out of the Hispanic category. In future research we plan to study the consistency in racial identification among Hispanics. In this sample, individuals who identified as White were less likely to change their race across the years in the study than those who identify as racial minorities. It may be that in the absence of a Hispanic race option, individuals who view their race as Hispanic tend to provide a race response to which they are not fully committed (Compton et al. 2012; Rodríguez 2000).

Finally, data collection mode (other than mail-out mail-back) and collecting data about non-relatives or distant relatives in the household were associated in our models with changes in Hispanic origin response. The presence of in-phone or in-person interviewers adds another filter to the collection of data by how questions are asked and how answers are interpreted and recorded. While researchers need to be aware of these effects, we find that the relative contribution of data collection factors in explaining

Hispanic origin response change is rather small compared to the influence of demographic, particularly ancestry, and contextual factors.

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Table 1. Consistency of Hispanic Origin Reporting Across Census 2000, American Community Survey 2006-2010 and 2010 Census, by Question Wording*					
Group	Census 2000	ACS 2006-2007	ACS 2008-2010	2010 Census	Weighted Row Percent
	"Is this person Spanish/ Hispanic/ Latino?"		"Is this person of Hispanic, Latino, or Spanish origin?"		
1	Hispanic	Hispanic		Hispanic	33.8
2	Hispanic	Hispanic		Non-Hispanic	0.5
3	Hispanic	Non-Hispanic		Hispanic	0.8
4	Hispanic	Non-Hispanic		Non-Hispanic	0.7
5	Non-Hispanic	Hispanic		Hispanic	0.9
6	Non-Hispanic	Hispanic		Non-Hispanic	0.7
7	Non-Hispanic	Non-Hispanic		Hispanic	0.8
8^	Non-Hispanic	Non-Hispanic		Non-Hispanic	1.1
9	Hispanic		Hispanic	Hispanic	52.4
10	Hispanic		Hispanic	Non-Hispanic	0.8
11	Hispanic		Non-Hispanic	Hispanic	1.0
12	Hispanic		Non-Hispanic	Non-Hispanic	1.1
13	Non-Hispanic		Hispanic	Hispanic	1.8
14	Non-Hispanic		Hispanic	Non-Hispanic	1.3
15	Non-Hispanic		Non-Hispanic	Hispanic	1.0
16^	Non-Hispanic		Non-Hispanic	Non-Hispanic	1.5
	Weighted Percent (Column)	39.2	60.8		100.0

* Excludes proxy and allocated/edited responses to Hispanic origin, age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.

^ Among individuals in the sample who identified always as non-Hispanic, 25.2 percent reported only Hispanic ancestry, 28.2 percent reported mixed ancestry and listed a Hispanic ancestry first, and 46.7 percent reported mixed ancestry and listed a Hispanic ancestry last.

Source: Census 2000, 2010 Census and 2006-2010 ACS 5-year data.

Table 2. Distribution of Dependent Variables in the Analysis of Hispanic Origin Identification, Responses to Census 2000, 2010 Census and ACS 2006-2010±	
<i>I. Census 2000 & ACS 2006-2007: "Is this person Spanish/Hispanic/Latino?"</i>	Weighted Percent
Hispanic in both (omitted category)	87.5
Hispanic in Census 2000, non-Hispanic in ACS 2006-2007	3.8
Non-Hispanic in Census 2000, Hispanic in ACS 2006-2007	3.9
Non-Hispanic in both	4.8
Total	100.0
<i>II. ACS 2008-2010 & 2010 Census: "Is this person of Hispanic, Latino, or Spanish origin?"</i>	Weighted Percent
Hispanic in both (omitted category)	89.0
Hispanic in ACS 2008-2010, non-Hispanic in 2010 Census	3.4
Non-Hispanic in ACS 2008-2010, Hispanic in 2010 Census	3.3
Non-Hispanic in both	4.3
Total	100.0
<i>III. Census 2000 & 2010 Census: "Is this person Spanish/Hispanic/Latino?" vs "Is this person of Hispanic, Latino, or Spanish origin?"</i>	Weighted Percent
Hispanic in both (omitted category)	88.0
Hispanic in Census 2000, non-Hispanic in 2010 Census	*3.1
Non-Hispanic in Census 2000, Hispanic in 2010 Census	*4.4
Non-Hispanic in both	4.6
Total	100.0
± Excludes proxy and allocated/edited responses to Hispanic origin, age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.	
* Difference is statistically significant at $p \leq 0.05$.	
Source: Census 2000, 2010 Census and 5-year ACS data for 2006-2010.	

Table 3. Group Characteristics by Consistency of Hispanic Origin Response, Linked Census 2000, ACS 2006-2010 and 2010 Census±								
Variables	Consistent Responses in Census 2000, ACS and 2010 Census		Inconsistent Responses between Census 2000 and 2010 Census		Inconsistent Responses to "Is this person Spanish/Hispanic/Latino?"		Inconsistent Responses to "Is this person of Hispanic, Latino or Spanish origin?"	
	1 Consistently Hispanic	2 Consistently Non- Hispanic	3 Hispanic in 2000, non- Hispanic in 2010	4 Non- Hispanic in 2000, Hispanic in 2010	5 Hispanic in Census 2000, non-Hispanic in ACS 2006- 2007	6 Non-Hispanic in Census 2000, Hispanic in ACS 2006- 2007	7 Hispanic in ACS2008-2010, non-Hispanic in 2010 Census	8 Non-Hispanic in ACS2008- 2010, Hispanic in 2010 Census
Number of Observations	527,219	22,220	12,020	18,392	10,844	10,515	14,289	13,303
Weighted sample size	10,298,518	312,933	192,233	302,137	178,424	181,050	247,954	240,463
Nativity/Length of U.S. Residence, %								
Born in U.S.	48.6 *	92.5	85.6 *	83.8	81.0 *	78.2	83.4	84.3
20 or more years in U.S., naturalized	21.0 *	4.3	5.8 *	8.0	9.3 *	7.9	6.6 *	8.3
20 or more years in U.S., not naturalized	11.3 *	0.8	2.1 *	2.8	2.6	2.9	2.3	2.5
10-19 years in U.S., naturalized	5.2 *	1.1	2.2 *	1.6	3.1 *	2.1	1.6	1.7
10-19 years in U.S., not naturalized	9.4 *	0.8	2.1	2.3	2.2 *	3.9	2.5 *	1.9
Fewer than 10 years in U.S.	4.5 *	0.4	2.3 *	1.5	1.9 *	5.1	3.5 *	1.3
English Proficiency, %								
Speaks English only	18.1 *	89.6	72.7 *	67.6	68.2 *	59.8	66.3 *	72.8
English well or very well, other language at home	58.1 *	9.9	23.0 *	27.3	27.9 *	30.8	27.2 *	23.0
English not well or not at all, other language at home	23.8 *	0.5	4.3 *	5.1	3.9 *	9.3	6.5 *	4.1
Education, %								
No high school	33.5 *	7.2	15.0 *	13.2	15.0 *	17.6	16.2 *	14.0
High school	26.7	26.1	29.1 *	24.6	31.2 *	28.4	27.5	27.8
Some college	25.2 *	35.7	33.6	33.8	30.4	30.5	32.5 *	33.9
College degree	9.9 *	20.3	14.8 *	19.0	15.7	15.9	16.1	16.8
Graduate or professional degree	4.7	10.8	7.5 *	9.5	7.7	7.6	7.7	7.6
Average Personal Income (Adj)	\$ 30,977 *	\$ 47,930	\$ 36,618 *	\$ 40,577	\$ 38,436	\$ 38,990	\$ 36,349 *	\$ 38,218
Median Personal Income (Adj)	\$ 22,828 *	\$ 33,808	\$ 26,498 *	\$ 29,857	\$ 28,718	\$ 27,910	\$ 25,326 *	\$ 26,346
Percent Hispanic in Tract of Residence in Census 2000								
Less than 25 percent	32.1 *	88.5	68.1	69.2	65.9 *	68.5	62.9 *	65.2
25 to less than 60 percent	31.5 *	9.6	19.6	18.7	21.7 *	18.4	23.5	23.6
60 percent or higher	36.5 *	1.9	12.2	12.0	12.3	13.1	13.6 *	11.2
Hispanic Background, %								
Mexican	61.2 *	15.0	44.7	43.5	41.3 *	46.8	52.4 *	43.7
Central American	7.9 *	3.2	3.0 *	6.7	3.9 *	6.2	4.8	4.5
South American	6.4 *	4.3	3.7 *	8.2	4.6 *	6.4	5.6	5.1
Cuban	5.9 *	3.6	3.4 *	7.5	4.1 *	6.7	4.5	4.7
Dominican	3.1 *	1.3	0.7 *	1.4	0.9 *	1.5	1.2	1.2
Puerto Rican	10.4 *	3.6	7.3 *	9.6	10.3	9.6	8.6 *	10.0
Other Hispanic ^	5.2 *	69.0	37.2 *	23.2	34.8 *	22.7	22.9 *	30.8
Ancestry, %								
Hispanic only	92.4 *	25.2	26.5 *	43.4	30.1 *	51.2	44.5 *	28.0
Mixed-Hispanic listed first	2.9 *	28.2	7.6 *	15.7	6.6 *	15.7	15.2 *	6.2
Mixed-Hispanic listed last	1.1 *	46.7	6.6 *	10.4	7.0 *	8.6	8.5 *	7.2
Non-Hispanic only †	0.9	n/a	45.4 *	23.1	42.3 *	18.2	22.3 *	43.2
Not specified²	2.7	n/a	13.9 *	7.4	14.0 *	6.2	9.5 *	15.5
* Estimates are statistically significantly different at p<=.05 between the groups compared.								
± Excludes proxy and allocated/edited responses to Hispanic origin, age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.								
^ Other Hispanic include Spanish Basque, Spanish, Spaniard, Andalusian, Asturian, Castilian, Catalanian, Balearic Islander, Gallego, Valencian, Canary Islander, Latin American, Latin, Latino, Hispanic, Californio, Tejano, Nuevo Mexicano or Spanish American.								
† Of those reporting only non-Hispanic ancestries, 17.8 percent reported as Hispanic in Census 2000, 2010 Census and ACS; and 82.2 percent reported as Hispanic in at least one of these sources.								
§ Not specified ancestry includes "American," "North American," "United States," names of states, uncodable entries, other responses and no responses in both ancestry fields.								
Source: Census 2000, 2010 Census and 2006-2010 ACS 5-year data.								

(Continue) Table 3. Group Characteristics by Consistency of Hispanic Origin Response, Linked Census 2000, ACS 2006-2010 and 2010 Census†								
Variables	Consistent Responses in Census 2000, ACS and 2010 Census		Inconsistent Responses between Census 2000 and 2010 Census		Inconsistent Responses to "Is this person Spanish/Hispanic/Latino?"		Inconsistent Responses to "Is this person of Hispanic, Latino or Spanish origin?"	
	1 Consistently Hispanic	2 Consistently Non- Hispanic	3 Hispanic in 2000, non- Hispanic in 2010	4 Non- Hispanic in 2000, Hispanic in 2010	5 Hispanic in Census 2000, non-Hispanic in ACS 2006- 2007	6 Non-Hispanic in Census 2000, Hispanic in ACS 2006- 2007	7 Hispanic in ACS2008-2010, non-Hispanic in 2010 Census	8 Non-Hispanic in ACS2008- 2010, Hispanic in 2010 Census
Race Reported at Time 1, %								
White alone	46.3 *	87.5	62.5 *	80.3	61.1 *	79.3	72.8 *	76.0
Black alone	1.0 *	6.5	6.9	7.3	6.0 *	7.6	5.1 *	8.7
AIAN alone	0.9 *	0.6	2.5	2.6	2.0	2.4	1.7	2.0
Asian/NHPI alone	0.2 *	3.5	2.8	2.7	3.0	3.5	2.6 *	3.6
Some other race alone	36.2 *	0.3	13.3 *	1.0	15.2 *	0.8	9.8 *	4.9
±Two or more races	0.6 *	0.9	4.6 *	2.1	3.9 *	1.8	5.7 *	3.4
No race response	14.8 *	0.7	7.5 *	4.0	8.8 *	4.4	2.3 *	1.3
Race Reported at Time 2, %								
Reported same race	48.3 *	96.3	70.1 *	74.6	68.5	68.8	75.8 *	70.3
Changed race response	28.1 *	2.4	20.3 *	17.2	21.6 *	23.7	19.6 *	22.5
Missing race (in one or both years)	23.6 *	1.3	9.6 *	8.1	10.0 *	7.5	4.6 *	7.2
Age Group, %								
25 to 44 years old	50.3 *	46.7	54.5 *	57.1	55.3 *	58.2	51.6 *	53.9
45 to 64 years old	37.7 *	41.0	34.0	33.2	34.0 *	32.0	35.2	34.7
65 and older	11.9	12.3	11.5 *	9.7	10.7 *	9.8	13.1 *	11.4
Gender, %								
Male	46.4 *	44.9	44.6	45.8	43.3	44.6	43.8	43.3
Female	53.6 *	55.1	55.4	54.2	56.7	55.4	56.2	56.7
Marital Status, %								
Married	63.5 *	65.9	58.6	58.1	61.3	59.5	58.3	58.2
Never married	17.6 *	15.5	20.3 *	22.4	18.8 *	20.6	21.3	21.7
Separated/divorced/widow(er)	18.9	18.6	21.1 *	19.5	19.9	19.9	20.4	20.1
Region of Residence in Census 2000, %								
West	43.2 *	31.7	40.6	39.8	40.8 *	37.9	38.6	39.8
Midwest	7.7 *	12.9	13.4 *	11.6	12.0	11.9	12.2	11.5
Northeast	14.3	14.6	12.3 *	15.8	14.9 *	16.7	14.2	14.8
South	34.8 *	40.7	33.8	32.7	32.4	33.5	35.0	33.8
Relationship to Reference Person, %								
Reference person or her/his spouse in both	65.4 *	74.1	61.6	60.7	66.5 *	64.5	73.4	74.3
Child, sibling or parent in both	6.9 *	4.1	6.0	6.1	4.6	5.2	8.3 *	7.5
All other relatives and unrelated household members	27.7 *	21.7	32.4	33.2	28.9	30.2	18.3	18.2
Data Collection Mode, %								
Both mail-out-mail-back	56.9 *	59.2	45.8 *	51.5	50.9	52.0	61.3 *	70.2
Other modes/switches	43.1 *	40.8	54.2 *	48.5	49.1	48.0	38.7 *	29.8
* Estimates are statistically significantly different at p<=.05 between the groups compared.								
± Excludes proxy and allocated/edited responses to Hispanic origin, age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.								
^ Other Hispanic include Spanish Basque, Spanish, Spaniard, Andalusian, Asturian, Castilian, Catalanian, Balearic Islander, Gallego, Valencian, Canary Islander, Latin American, Latin, Latino, Hispanic, Californio, Tejano, Nuevo Mexicano or Spanish American.								
† Of those reporting only non-Hispanic ancestries, 17.8 percent reported as Hispanic in Census 2000, 2010 Census and ACS; and 82.2 percent reported as Hispanic in at least one of these sources.								
§ Not specified ancestry includes "American," "North American," "United States," names of states, uncodable entries, other responses and no responses in both ancestry fields.								
Source: Census 2000, 2010 Census and 2006-2010 ACS 5-year data.								

Table 4. Multinomial Logistic Regression Predicting Changes in Hispanic Origin Identification in Census and ACS, Odds Ratios (OR)±				
	Year 1 = Census 2000 Year 2 = ACS 2006-2007		Year 1 = ACS 2008-2010 Year 2 = 2010 Census	
Wording of the Hispanic Origin Question	"Is this person Spanish/ Hispanic/ Latino?"		"Is this person of Hispanic, Latino, or Spanish origin?"	
Variables in the Analysis	Hispanic in Census 2000, Non-Hispanic in ACS	Non-Hispanic in Census 2000, Hispanic in ACS	Hispanic in ACS, non-Hispanic in 2010 Census	Non-Hispanic in ACS, Hispanic in 2010 Census
	Hispanic in both years is the reference category		Hispanic in both years is the reference category	
	OR	OR	OR	OR
Socio-Economic Characteristics, Nativity, and English Language Proficiency				
Nativity/Length of US Residence				
Born in the US (omitted)				
20+ yrs in US, naturalized	0.69***	0.39***	0.34***	0.53***
20+ yrs in US, not naturalized	0.63***	0.43***	0.36***	0.56***
10-19 yrs in US, naturalized	0.81*	0.39***	0.39***	0.46***
10-19 yrs in US, not naturalized	0.46***	0.46***	0.49***	0.53***
Fewer than 10 yrs in US	0.54***	0.78**	1.22*	0.66***
English Proficiency				
Speaks English only (omitted)				
English very well or well, other language at home	0.35***	0.41***	0.38***	0.33***
English not well or not at all, other language at home	0.23***	0.46***	0.31***	0.27***
Education				
No high school	0.88**	1.02	0.94	0.87***
High school diploma (omitted)				
Some college	0.90**	0.93	0.90***	0.92***
College degree	0.96	0.92*	0.93*	1.00
Graduate or professional degree	0.84**	0.80***	0.81***	0.81***
Personal Income (CPI Adjusted, log)	0.99**	0.99**	0.99**	1.00
Demographic Characteristics				
Hispanic Background				
Mexican (omitted)				
Central American	1.19	1.67***	1.13	1.24**
South American	0.88	1.20**	1.01	1.02
Cuban	1.21**	1.36***	1.07	1.35***
Dominican	0.87	1.30*	0.80*	1.00
Puerto Rican	0.71***	0.50***	0.47***	0.67***
Other Hispanic ^	2.88***	1.84***	2.50***	4.03***
Ancestry Reported in ACS				
Hispanic only (omitted)				
Mixed, Hispanic first	2.24***	2.70***	2.92***	1.81***
Mixed, Hispanic last	6.71***	4.10***	4.04***	5.42***
Non-Hispanic only †	57.38***	12.68***	15.20***	47.93***
Not specified§	12.57***	3.08***	3.97***	11.12***
Race Reported in Year 1				
White alone (omitted)				
Black alone	2.08***	2.97***	2.03***	2.07***
American Indian or Alaska Native alone	0.84	0.94	0.84	0.54***
Asian/NHPI alone	2.39***	3.93***	2.67***	1.80***
Some Other Race alone	0.65***	0.02***	0.68***	0.32***
±Two or More races	1.07	0.62***	1.27***	0.47***
No race response	2.09***	0.24***	1.98***	0.33***
*p<=.05, **p<=.01, ***p<=.001.				
± Excludes proxy and allocated/edited responses to Hispanic origin, age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.				
^ Other Hispanic include Spanish Basque, Spanish, Spaniard, Andalusian, Asturian, Castilian, Catalanian, Balearic Islander, Gallego, Valencian, Canary Islander, Latin American, Latin, Latino, Hispanic, Californio, Tejano, Nuevo Mexicano or Spanish American.				
† Of those reporting only non-Hispanic ancestries, 17.8 percent reported as Hispanic in Census 2000, 2010 Census and ACS; and 82.2 percent reported as Hispanic in at least one of these sources.				
§ Not specified ancestry includes "American," "North American," "United States," names of states, uncodable entries, other responses and no responses in both ancestry fields.				
Source: Census 2000, 2010 Census and 2006-2010 ACS 5-year data.				

(Continued) Table 4. Multinomial Logistic Regression Predicting Changes in Hispanic Origin Identification in Census and ACS, Odds Ratios (OR)±				
	Year 1 = Census 2000 Year 2 = ACS 2006-2007		Year 1 = ACS 2008-2010 Year 2 = 2010 Census	
Wording of the Hispanic Origin Question	"Is this person Spanish/ Hispanic/ Latino?"		"Is this person of Hispanic, Latino, or Spanish origin?"	
Variables in the Analysis	Hispanic in Census 2000, Non-Hispanic in ACS	Non-Hispanic in Census 2000, Hispanic in ACS	Hispanic in ACS, non-Hispanic in 2010 Census	Non-Hispanic in ACS, Hispanic in 2010 Census
	Hispanic in both years is the reference category		Hispanic in both years is the reference category	
(Continued) Demographic Characteristics	OR	OR	OR	OR
Race Reported in Year 2				
Same race (omitted)				
Different race	0.70***	0.86***	0.71***	1.05
Missing race (in one or both sources)	0.30***	0.86*	0.27***	0.97
Age Group				
25-44 (omitted)				
45-64 years old	0.91***	0.85***	1.12***	0.97
65 years and older	1.04	0.86***	1.42***	1.03
Gender				
Male (omitted)				
Female	1.09**	1.05*	1.12***	1.14***
Marital Status				
Married (omitted)				
Never married	0.86***	0.98	0.85***	0.79***
Separated, divorced or widow(er)	0.92	1.04	0.92**	0.86***
Contextual Factors				
Region of Residence in Year 1				
West (omitted)				
Midwest	1.07	1.11*	1.27***	1.20***
Northeast	1.20***	1.35***	1.51***	1.31***
South	1.15***	1.07*	1.32***	1.18***
Region of Residence in Year 2				
Same region (omitted)				
Different region	1.34***	1.56***	2.53***	1.72***
Percent Hispanic in Tract of Residence in Year 1				
Less than 25 percent (omitted)				
25 to les than 60 percent	0.57***	0.47***	0.56***	0.63***
60 percent or higher	0.35***	0.35***	0.36***	0.44***
Change in Percent Hispanic in Tract (Year 2 minus Year 1)	0.31***	1.12	0.10***	1.76**
Relationship to Reference Person				
Reference person or spouse (omitted)				
Parent/sibling/child of reference person	1.05	1.03	1.22***	1.08
All other relatives and unrelated household members	1.27***	1.28***	1.32***	1.32***
Census Data Collection Mode				
Both mail-out mail-back (omitted)				
Other modes/switches	1.72***	1.47***	1.55***	2.49***
Weighted Sample Size	4,456,794		6,961,224	
Unweighted Sample Size	231,116		360,757	
*p<=.05, **p<=.01, ***p<=.001.				
± Excludes proxy and allocated/edited responses to Hispanic origin,age and sex items, as well as individuals who reported Two or More Races with SOR in Census 2000.				
^ Other Hispanic include Spanish Basque, Spanish, Spaniard, Andalusian, Asturian, Castillian, Catalonian, Balearic Islander, Gallego, Valencian, Canary Islander, Latin American, Latin, Latino, Hispanic, Californio, Tejano, Nuevo Mexicano or Spanish American.				
† Of those reporting only non-Hispanic ancestries, 17.8 percent reported as Hispanic in Census 2000, 2010 Census and ACS; and 82.2 percent reported as Hispanic in at least one of these sources.				
§ Not specified ancestry includes "American," "North American," "United States," names of states, uncodable entries, other responses and no responses in both ancestry fields.				
Source: Census 2000, 2010 Census and 2006-2010 ACS 5-year data.				

Table 5. Relative Contribution of Factors Associated with Changes in Hispanic Origin Response between Two Years, Net Explanatory Power of Selected Covariates in the Model*									
Variables	Description of Categories in the Variables Removed	"Is this person Spanish/ Hispanic/ Latino?"				"Is this person of Hispanic, Latino, or Spanish origin?"			
		Chi-square points	df	Loss of fit when variable(s) removed from the model	Loss of fit as percent of LR chi-square points in full model**	Chi-square points	df	Loss of fit when variable(s) removed from the model	Loss of fit as percent of LR chi-square points in full model**
Likelihood Ratio Model Chi-square in Fully Specified Model		1,058,168	90			1,377,982	90		
Model Chi-square removing:									
Ancestry	Hispanic only, mixed-Hispanic first, mixed-Hispanic last, non-Hispanic only, not specified	767,013	82	291,155	27.5%	962,233	82	415,749	30.2%
Race reported in Year 1 and whether same race was reported in Year 2	White alone, Black alone, AIAN alone, Asian/NHPI alone, SOR alone, Two or More, No race response; Same race/different race reported in Year 2 or race was missing in one or both years.	924,745	74	133,423	12.6%	1,326,734	74	51,247	3.7%
Hispanic Origin detail	Mexican, Central American, South American, Cuban, Dominican, Puerto Rican, Other Hispanic	1,022,917	78	35,251	3.3%	1,307,234	80	70,748	5.1%
Language spoken at home and english proficiency if language at home is not English only	English only, English well or very well, English not well or at all	1,024,005	86	34,163	3.2%	1,324,188	86	53,794	3.9%
Hispanic in tract and changes in percent Hispanic in tract	Less than 25%, 25 to 60%, 60% or higher; percent change of Hispanic representation in the tract between Year 1 and Year 2	1,025,511	84	32,657	3.1%	1,335,716	84	42,266	3.1%
Yrs in the US and naturalization	Born in the US, 20+yrs naturalized, 20+yrs not naturalized, 10-19 yrs naturalized, 10-19 yrs not naturalized, fewer than 10 yrs	1,044,840	80	13,328	1.3%	1,354,007	80	23,975	1.7%
Data collection design elements	Relationship to the household reference person and mode of data collection	1,046,798	84	11,369	1.1%	1,344,736	84	33,246	2.4%
Region of residence in Year 1 and whether in same region in Year 2	West, Midwest, Northeast, South and whether region changed	1,054,136	82	4,031	0.4%	1,367,347	82	10,634	0.8%
Socioeconomic status	Personal income and educational level (less than HS, HS, some college, college, graduate or professional)	1,056,930	80	1,238	0.1%	1,376,479	80	1,503	0.1%
* To assess the relative statistical impact of selected variables in the models, we ran models without each of the variables listed and compared them to the full model. This captures the net loss of fit when each covariate is removed after all others have been accounted for.									
** Percent is computed dividing the loss in LR chi-square points in the model excluding the variable of interest by the chi-square in the fully specified model.									